Lower Mississippi River
Sub-basin Committee on Hypoxia

June 17, 2008
Jean Lafitte National Park Headquarters
New Orleans, La.

AGENDA

I. Welcome & Introductions

II. Action Plan Implementation – State Nutrient Reduction Activities

III. Louisiana Nutrient Reduction Strategy Development

IV. Conclusion

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Participants:

Wayne Anderson, Minnesota Pollution Control Agency
Dr. Tim Appleboom, USDA Agricultural Research Service
Dr. Len Bahr, Governor's Office of Coastal Activities
Ken Brazil, Arkansas Natural Resources Commission
Doug Daigle, Lower Mississippi River Sub-basin Committee
Bill Herz, The Fertilizer Institute
Bryan Hopkins, Missouri Department of Natural Resources
Richard Ingram, Mississippi Department of Environmental Quality
John Kessler, Ohio Department of Natural Resources
Chris Kirkham, Times-Picayune
Dr. Martin Locke, USDA Agricultural Research Service
Dugan Sabins, Louisiana Department of Environmental Quality
Mike Sullivan, USDA Natural Resources Conservation Service
Ken Teague, EPA Region 6
Clark Vega, Harris Deville Associates
Mike Wells, Missouri Department of Natural Resources

Welcome & Introductions – Doug Daigle, LMRSBC

Update on Sub-basin Activities

Bonnet Carre Spillway opening – The Spillway was opened this spring due to high river levels. A number of agencies and universities collected data. Significant questions arise from putting roughly one-tenth of the Mississippi River flow into Lake Pontchartrain. Are there possible effects on the formation of hypoxia? The opening will also affect the Mississippi Sound; Mississippi Department of Marine Resources is monitoring there. The Basics of the Basin Symposium will have a session focused on the spillway opening, and there are discussions about a science workshop this fall.

USDA ARS Soil & Water Research Unit at LSU – The status of the ARS Unit housed at Louisiana State University is uncertain, with a proposed move of the Unit to Houma, La. Work on the Cabin Teele watershed is at a hiatus because of that. The research there

involved integrating best management practices, stream water management, and use of wetland diversions. Years of preparation went into making Cabin Teele a perfect research platform for this work. Models of the watershed have been developed, simulations are being run, but need data from sampling to calibrate it. Local growers, the Madison Parish Soil & Water Conservation District, NRCS, and other partners are in full support. Cabin Teele was chosen as one of the Lower Mississippi River Sub-basin Committee's Focus Watersheds. Supporters are working to keep the Unit open at its LSU location.

Nutrient Use Developments – The Fertilizer Institute and the International Plant Nutrition Institute are both serving on a nutrient use committee organized under a Conservation Innovation Grant (CIG). They're focused on refining fertilizer best management practices (BMPs) for 5-6 common crops. The BMPs should be coming out soon. They'll focus on using nutrients as efficiently as possible. High prices are a driving motivator.

A new GIS database is being developed that will provide more accurate fertilizer use data. Currently, there is data from USGS, APCO, and the TRI reports. The database is in phase II and could large replace APCO data.

USDA is cutting funding for its National Agriculture Survey database. The last corn data is from '05. They may eliminate the survey or go to every 5 years. It's being asked why the survey should be abandoned at the most important time for corn in 50 years.
This also affects risk assessment for pesticide use. Without site-specific data, you can't re-register the chemicals being used. This is being cast as a funding issue, but it's the most impartial source of data available.

Current levels of fertilizer production in U.S.: In 1990, 90% of the nitrogen-based fertilizer used in the U.S. Was produced in the U.S. Now, 55% is imported. Natural gas prices have seriously impacted nitrogen production, and potential climate change legislation could also. About 26 plants have closed in the last 10 years.

Update on State Activities

Missouri – A Parks, Soil, and Water Conservation Tax has generated about $42 million a year. About $29 million of that goes to landowners through cost-share and incentive programs. About $7 million is targeted to watersheds. Some watersheds have 319 funds, generally about $750,000 per project. Factors for selection include whether the watershed is on the 303d list of impaired waterbodies, and whether the project has local

support. “Agriculture Non-point Source Areas for land treatment” are approved through the Soil and Water Conservation Committees.

Currently, there's not a lot of monitoring for these efforts. Tons of soil lost is measured, but not water quality in most cases. BMPs for watersheds can target areas of 10,000 acres. A plan is developed, with milestones, and checked by a committee. The Governor expande the stream gauge network and water quality monitoring stations.

The soil and water programs have generally decided that on-the-ground practices were more fundable than monitoring. They use well-established practices. Projects can come up with new innovative practices, and standards will be needed for those. Technical assistance is a real drawing card for the districts to develop Special Area land treatment projects.

The wet spring this year has affected conservation work. It's hard to spend the funds as planned in some areas.

Arkansas – The state is negotiating a CREP area in the Illinois River Basin in northwest Arkansas. The area doesn't show up as a contributor of nutrients to the mainstem river. There's a goal of 15,000 acres for the sign-up. Point source dischargers in that part of the state have also reduced effluent concentrations of phosphorus.

Mississippi – The Lake Washington Focus Watershed project is moving forward. A nutrient reduction pilot project has applied for an $800,000 grant. It would include a lot of monitoring. This is the next to last year for the TMDL consent decree that the state is operating under. A lot of work is going on in the delta – TMDLs there are calling for high reductions (more than the Action Plan.) Gulf of Mexico Program funding is being pursued for a nutrient reduction strategy in the delta. The key questions to answer are: What is achievable? What is the cost?

For coastal watersheds, a NOAA grant for developing nutrient strategies is being sought through the Gulf Alliance (GA). Mississippi is working to develop a template with other GA states. Pilot projects are being developed. The states have gotten active in leveraging activities from the 319 program, Gulf Alliance, etc. They want standard operating practices that EPA recognizes. These activities will put us in a better position for developing nutrient criteria.

MDEQ is planning to work with Mississippi's agricultural community to develop a nutrient reduction strategy for the Delta.

Some pilot projects have been started using wetland assimilation.

The ARS National Sedimentation Lab has compiled available nutrient data. They've been looking at practices such as stem grasses and other vegetation in drainage ditches, buffer strips, constructed wetlands, conservation tillage, and cover crops.

Louisiana Nutrient Reduction Strategy

Louisiana has begun the process of developing its nutrient reduction strategy under the Revised Action Plan. A planning meeting was held April 11 with state and federal staff, university researchers, and others. Subsequent discussion meetings have been held, along with efforts to get stakeholder input. Those efforts will continue.

An outline of the draft strategy has identified the main areas of action: tributary watersheds, industrial and municipal, coastal-distributary. A process of agricultural outreach that focuses on specific recommended practices that will help reduce nutrient loss and runoff is being developed. There will also be a section for future opportunities, which are possibilities not currently funded or underway.

The strategy is being developed based on the state's hydrology; specifically, what watersheds drain into the Mississippi and Atchafalaya Rivers. There are smaller rivers and watersheds that drain directly into the Gulf, but their input is dwarfed by the inflows of the Mississippi and Atchafalaya. The Ouachita-Tensas-Black River watershed is an area of significant input to the Atchafalaya, and there are several 319 projects, TMDLs, and watershed restoration efforts already underway there. The Ouachita River, along with Bayou Bartholomew, flows into Louisiana from Arkansas, and there is extensive activity in both states to restore the watershed.

Outline of Draft Louisiana Nutrient Reduction Strategy

Components:

Tributary Watersheds
Agricultural Outreach
Industrial/Municipal
Coastal/Distributary
Future Possibilities
Background Studies

I. Tributary Watersheds

Ouachita-Tensas-Black River Watershed -

TMDLs for nitrogen and DO – Louisiana DEQ
CREP, CRP, and WRP projects – LDEQ, USDA, LDAF
Ouachita River Watershed Restoration – Nature Conservancy (TNC)

Goals:

Ouachita River – Reduce nonpoint source loading by 30% (TMDL)
TNC Watershed Implementation Plan – 90% reduction in sediment yield, 85% reduction in sediment loading

Tensas River National Wildlife Refuge Reforestation – USFWS, Trust for Public Land; Tensas River Conservation Security Program Watershed (2006)

Black River – Reduce nonpoint source loading by 42% (TMDL for DO)

Bayou Bartholomew – TNC Restoration projects

Avoyelles Parish WRP project – NRCS

Wetland Sinks – Three Rivers/Red River Wildlife Management Areas, Cat Island National Wildlife Refuge

II. Agricultural Outreach

Recommended Best Management Practices: Cover Crops, Controlled Drainage Management, Winter flooding of fields, Wetland filters and sinks, Nutrient/fertility management

Focus Watersheds – Ouachita, Tensas, Black; Coulee Baton (coastal)

III. Industrial/Municipal

Baton Rouge – Stormwater BMPs

New Orleans – Sewage & Water Board Wetland Assimilation/Restoration Project

Environmental Leadership Program/Louisiana Chemical Association – Nitrogen reduction techniques – replication and outreach

IV. Coastal/Distributary

Operating Diversions – Davis Pond, Caernarvon – nutrient monitoring

Coastal Watershed – Coulee Baton – Vermillion SWCD

Atchafalaya River – USGS, LDEQ, LSU

Delta NWR/Pass a Loutre WMA

V. Future Possibilities

Lake St. Joseph Watershed (NE La.)

Old River Flow Management

East Atchafalaya Restoration Spillway

WRDA/LCA Projects

Concluding Discussion Points

It would be helpful to have an agreed-on template for state nutrient reduction strategies, with indicators. The 2001 Action Plan had a list of indicators that is still applicable.

A checklist of a formatted process for nutrient reduction development is another possibility.

Monitoring is a critical component of strategies.